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EXAMINER	
PATEL, ASHOKKUMAR B	
ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/735,362	DEKONING ET AL.
	Examiner	Art Unit
	Ashok B. Patel	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 are subject to examination.

Response to Arguments

2. Applicant's arguments filed June 28, 2004 have been fully considered but they are not persuasive for the following reasons:

Referring to claims 1, 2 and 3,

In response to Applicant's argument that "Neither Lara nor Bradley separately or in combination disclose or appear to suggest a storage network through which a content server reads data. The Web server of Lara reads data from the database through the agent in the host. Replacing the databases of Lara with the storage network of Bradley would not create the device of the present invention because the Web server would still read data from the storage network through the agent, not through the storage network as required in claim 1." And "the host through the agent, the Lara system thus creates the bottleneck that the present invention avoids.", the reference Lara teaches, as Applicant has described and as previously ascertained by Examiner in the previous office action, a Web service system (Fig. 2) that connects a number of hosts to the internet. Each of the hosts include at least one Web server, a database and an agent which connects to the Web server and the database and provides an interface between the host and the Web service system. It appears that the agent passes all of the information in and out of the host, including updated information from a content distributor and data sent to the Internet from the Web server. It also appears that the Web server only accesses the database through the agent as well. Lara does not

disclose or appear to suggest a storage network. By routing all information to and from the host through host. The reference also teaches that the "A web service system according to the invention correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. (para. [0008]), and as such, according to the reference the system does not create the bottleneck. Also, the agent of Lara serves two purposes, one, it creates the bypass mechanism for content distributor (a production server with which new data is developed to update the current data for the content and which sends the new data through the network bypassing the content server.), and two, it provides read access to a storage device such as database as illustrated in Fig. 2. The necessity of introducing a storage network of Bradley is a must for the elements of claims 2 and 3 and for the reasons that are explained by the Applicant by analyzing the teachings of Bradley (initiator and multicast) on page 9. And, that is how the references in combination suggest a storage network through which a content server reads data.

Referring to claims 4 and 11,

In response to Applicant's arguments that "Neither Lara nor Bradley appear to disclose or suggest a local network that is bypassed by a production server when sending new data through the storage network to the storage device. Neither Lara nor Bradley appear to disclose or suggest bypassing any sort of network at all. The combination of Lara and Bradley also fail to disclose or suggest this requirement of claim 4.", the reasons set forth as stated above for claims 1, 2 and 3, the local network is formed

which includes the Lara's Traffic Manager and Manager connected to the "Agent" which is bypassed, as shown in Fig.2 of reference Lara, when sending the new data through Bradley's storage network which includes the storage device.

Referring to claims 5, 6 and 7,

In response to Applicant's argument that "Neither Lara nor Bradley disclose or appear to suggest servicing data accesses from either current or new data by reading the data with a content server from a storage device across a storage network as required in amended claim 5. If the Bradley storage network were substituted for the databases of Lara, as asserted, the combination would still not provide all of the material required in amended claim 5, because the combination would not service data accesses by reading data with a content server from a storage device across a storage network. Moreover, replacing the databases of Lara with the storage network of Bradley would not be obvious because it would not provide the beneficial result of providing different paths for data sent to the shared network and updated data sent to storage which is obtained by the present invention. The Lara device updates data in the databases and connects the web server to the Internet through the agents in the hosts.", the reasons set forth as stated above for claims 1, 2 , 3, and 4, and the teaching of the reference Lara "A web service system according to the invention correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. (para. [0008]), and as such, according to the reference the system does not create the bottleneck. Also, the agent of Lara serves two purposes, one, it

creates the bypass mechanism for content distributor (a production server with which new data is developed to update the current data for the content and which sends the new data through the network bypassing the content server.), and two, it provides read access to a storage device such as database as illustrated in Fig. 2. This provides the servicing the data accesses from current data by reading the current data for the content with a content server from a storage device across a storage network and sending the current data through the shared network; transmitting the new data from a production server through the storage network to the storage device while bypassing the content server; replacing the current data on the storage device with the new data, and servicing the data accesses from the new data by reading the new data for the content with the content server from the storage device across the storage network and sending the new data through the shared network.

Referring to claims 8, 9 and 10,

In response to Applicant's arguments for theses claims, as stated in the previous office action in combination with the teachings of the reference Bradley along with the reasons set forth above, for the claims 1, 2, 3 and 4, the reference Lara also teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated. And after the updating is complete the web server interface can be signaled to again use the normal area (new content) ([0079]). The reference also teaches of the traffic manager with a capability to divert the traffic to the snapshot copy of the content when the web servers are not disabled in order to update content. ([0078]). The reference

also teaches that the content distributor (production server) can be on the same host as the manager (Fig. 2, element 110) with traffic manager (Fig. 2, element 120). ([0046]). The reference Lara also teaches the content control user interface 126 coupled to the content distributor which affords the designer to keep track of the changes, and manually identifying the changes to the content distributor, communicating a manifest to the content distributor 125. ([0049]).

Referring to claim 12 and 13,

In response to Applicant's arguments for theses claims, as stated in the previous office action in combination with the teachings of the reference Bradley along with the reasons set forth above, for the claims 1, 2, 3 and 4, the reference Lara also teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated. And after the updating is complete the web server interface can be signaled to again use the normal area (new content) ([0079]). The reference also teaches of the traffic manager with a capability to divert the traffic to the snapshot copy of the content when the web servers are not disabled in order to update content. ([0078]). The reference also teaches that the content distributor (production server) can be on the same host as the manager (Fig. 2, element 110) with traffic manager (Fig. 2, element 120). ([0046]). The reference Lara also teaches the content control user interface 126 coupled to the content distributor which affords the designer to keep track of the changes, and manually identifying the changes to the content distributor, communicating a manifest to the content distributor 125. ([0049]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lara et al. (herein after Lara) (Pub. No. US 2003/0041094) in view of Bradley (US 6, 665, 780)

Referring to claim 1,

The reference Lara teaches the content server (web server) connected to the shared network to receive the data accesses and to respond to the data accesses by sending the content through the shared network (Fig. 2, element 102, [0011], [0031]). The reference also teaches content distributor (Fig. 2, element 125) which has the ability to provide content changes to the host (through agent to database bypassing web server) (to storage device bypassing the content server). (Fig. 2, [0011]). The reference also teaches that the content distributor can be located on a separate host (server). ([0046]). (a production server with which new data is developed to update the current data for the content and which sends the new data through the network bypassing the content server.) Although, the reference teaches that the web service system that can include any number of web servers and that is including the databases (Fig. 2, elements 108) (the storage of the content for delivering to users), the reference explicitly fails to teach

the storage network. The reference Bradley teaches the storage network that can be connected through the shared network. (Fig. 3B). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage devices associated with Bradley's storage network and making them serve the content upon requested by the users as previously served by the databases. Thus, web service system correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. This is accomplished such that the content change is not noticeable to a browser engaged in a transaction with a web server, and so that content versions are preserved, both for consistency of transactions started using older content, and so that a web server can revert to the older content if there is a problem with an update. A web service system of the invention also can track content changes, and notify caching servers as appropriate that cached content has become invalid as taught by Lara.

Referring to claims 2 and 3,

Keeping in mind the teachings of Lara as indicated above, the reference Lara also teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated. ([0079])(a plurality of the content servers, each connected to the storage network; and a plurality of the storage devices, each connected to the storage network and corresponding to one of the content servers and containing duplicate

copies of the current data for the content and snapshot volumes of the current data for the content contained on each of the storage devices, and wherein the content servers read the current data for the content from the snapshot volumes on the corresponding storage devices while the production server sends the new data to the first storage device and the first storage device sends the new data to the other storage devices). The reference Lara fails to teach the first one of the databases (first storage device) that sends the new data to other ones of the storage devices through the storage network. The reference Bradley teaches that the initiator storage is associated with a group of storage devices (storage devices in the network) where the group of storage devices obtains their content updates from the initiator device. (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage devices associated with Bradley's storage network and making them serve the content upon requested by the users as previously served by the databases. And, when the content of the web site needs to be updated, the update is just sent to the first of the storage devices (the initiator) and the first of the storage devices will update the content of the rest of the devices in the group (storage devices in the network). This allows each of the storage of the group of storages to independently copy the modification so as to maintain data consistency between the initiator storage and each storage of the group of storage as taught by Bradley.

Referring to claims 4 and 11,

Keeping in mind the teachings of Lara as indicated above, the reference Lara also teaches that content distributor bypasses the local network to provide the updated content to the database of the web server as shown in Fig. 2. (the production server bypasses the local network when sending the new data through the storage network to the storage device.). The reference explicitly fails to teach the storage network. The reference Bradley teaches the storage network that can be connected through the shared network. (Fig. 3B). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage devices associated with Bradley's storage network such that the updates are provided to the storage devices through the Bradley's network bypassing the local network. Thus, the updates of the web content can be directly sent to storage devices as shown by Lara in Fig. 2 through the network provided by Bradley to which each of the storage devices are associated.

Referring to claim 5,

Keeping in mind the teachings of Lara as indicated above, the reference Lara teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated and after the content is updated, the content is allowed to be accessed. ([0079]) (servicing the data accesses from current data by reading the current data for the content with a content server from a storage device and sending the current data through the shared network and servicing the data accesses from the new data by

reading the new data for the content with a content server from the storage device and sending the new data through the shared network .) The reference also teaches content distributor (Fig. 2, element 125) which has the ability to provide content changes to the host (through agent to database bypassing web server) (to storage device bypassing the content server). (Fig. 2, [0011]). The reference also teaches that the content distributor can be located on a separate host (server). ([0046]). Although the reference teaches that the web service system that can include any number web servers and that is including the databases (Fig. 2, elements 108) (storage of the content for delivering to the users), the reference explicitly fails to teach the storage network. The reference Bradley teaches the storage network that can accessible connected through the network. (Fig. 3B). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage devices associated with Bradley's storage network such that the updated content can be sent directly to the storage devices by bypassing the web server (content server) as shown by Lara. Thus, web service system correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. This is accomplished such that the content change is not noticeable to a browser engaged in a transaction with a web server, and so that content versions are preserved, both for consistency of transactions started using older content, and so that a web server can revert to the older content if there is a problem with an update. A web service system of

the invention also can track content changes, and notify caching servers as appropriate that cached content has become invalid as taught by Lara.

Referring to claims 6, 7 8 9 and 10,

The reference Lara teaches the content server (web server) connected to the shared network to receive the data accesses and to respond to the data accesses by sending the content through the shared network (Fig. 2, element 102, [0011], [0031]). The reference also teaches the content distributor (Fig. 2, element 125) which has the ability to provide content changes to the host (through agent to database bypassing web server) (to storage device bypassing the content server). (Fig. 2, [0011]). The reference also teaches that the content distributor can be located on a separate host (server). ([0046]). The reference Lara also teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated. And after the updating is complete the web server interface can be signaled to again use the normal area (new content) ([0079]). The reference also teaches of the traffic manager with a capability to divert the traffic to the snapshot copy of the content when the web servers are not disabled in order to update content. ([0078]). The reference also teaches that the content distributor (production server) can be on the same host as the manager (Fig. 2, element 110) with traffic manager (Fig. 2, element 120). ([0046]). The reference Lara also teaches the content control user interface 126 coupled to the content distributor which affords the designer to keep track of the changes, and manually identifying the changes to the content distributor, communicating a manifest to the content distributor 125.

([0049]). Although the reference teaches that the web service system that can include any number of web servers and that is including the databases (Fig. 2, elements 108) (the storage of the content for delivering to users), the reference explicitly fails to teach the storage network and the first one of the databases (first storage device) that sends the new data to other ones of the storage devices through the storage network. The reference Bradley teaches the storage network that can be connected through the shared network. (Fig. 3B) and the initiator storage is associated with a group of storage devices (storage devices in the network) where the group of storage devices obtains their content updates from the initiator device. (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage device associated with Bradley's storage network and making them serve the content upon requested by the users as previously served by the databases. And, when the content of the web site needs to be updated, the snapshots of the contents are created and the user accesses are served by the snapshots as taught by Lara. Also, when the update is ready, the update is just sent to the first of the storage devices (the initiator) and the first of the storage devices will update the content of the rest of the devices in the group (storage devices in the network) as taught by Bradley. And, after the update is complete, the accesses are served by the updated content as taught by Lara. This allows each of the storage of the group of storages to independently copy the modification so as to maintain data consistency between the initiator storage and each storage of the group of storage as taught by Bradley. Thus, web service system

correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. This is accomplished such that the content change is not noticeable to a browser engaged in a transaction with a web server, and so that content versions are preserved, both for consistency of transactions started using older content, and so that a web server can revert to the older content if there is a problem with an update. A web service system of the invention also can track content changes, and notify caching servers as appropriate that cached content has become invalid as taught by Lara.

Referring to claims 12 and 13,

The reference Lara teaches the content server (web server) connected to the shared network to receive the data accesses and to respond to the data accesses by sending the content through the shared network (Fig. 2, element 102, [0011], [0031]). The reference also teaches the content distributor (Fig. 2, element 125) which has the ability to provide content changes to the host (through agent to database bypassing web server) (to storage device bypassing the content server). (Fig. 2, [0011]). The reference also teaches that the content distributor can be located on a separate host (server). ([0046]). The reference Lara also teaches that the web pages that are being updated are saved separately as a snapshot of the original content and accesses to these pages are provided while the content is being updated. And after the updating is complete the web server interface can be signaled to again use the normal area (new content) ([0079]). (servicing the data accesses with a content server by reading the current data

for the content from the primary volume on the storage device and sending the new data through the shared network .) The reference also teaches of the traffic manager with a capability to divert the traffic to the snapshot copy of the content when the web servers are not disabled in order to update content. ([0078]). The reference also teaches that the content distributor (production server) can be on the same host as the manager (Fig. 2, element 110) with traffic manager (Fig. 2, element 120). ([0046]). The reference Lara also teaches the content control user interface 126 coupled to the content distributor which affords the designer to keep track of the changes, and manually identifying the changes to the content distributor, communicating a manifest to the content distributor 125. ([0049]). Although the reference teaches that the web service system that can include any number of web servers and that is including the databases (Fig. 2, elements 108) (the storage of the content for delivering to users), the reference explicitly fails to teach the storage network and the first one of the databases (first storage device) that sends the new data to other ones of the storage devices through the storage network. The reference Bradley teaches the storage network that can be connected through the shared network. (Fig. 3B) and the initiator storage is associated with a group of storage devices (storage devices in the network) where the group of storage devices obtains their content updates from the initiator device. (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lara by replacing the server databases (Fig. 2, elements 108) with the storage device associated with Bradley's storage network and making them serve the content upon requested by the users as previously

served by the databases. And, when the content of the web site needs to be updated, the snapshots of the contents are created and the user accesses are served by the snapshots as taught by Lara. Also, when the update is ready, the update is just sent to the first of the storage devices (the initiator) and the first of the storage devices will update the content of the rest of the devices in the group (storage devices in the network) as taught by Bradley. And, after the update is complete, the accesses are served by the updated content as taught by Lara. This allows each of the storage of the group of storages to independently copy the modification so as to maintain data consistency between the initiator storage and each storage of the group of storage as taught by Bradley. Thus, web service system correctly and efficiently updates changed content on the one or more web servers in the system, so that the changes are consistent among the web servers and so that the changes do not require excessive network bandwidth. This is accomplished such that the content change is not noticeable to a browser engaged in a transaction with a web server, and so that content versions are preserved, both for consistency of transactions started using older content, and so that a web server can revert to the older content if there is a problem with an update. A web service system of the invention also can track content changes, and notify caching servers as appropriate that cached content has become invalid as taught by Lara.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (703) 305-2655. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp
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